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1. (Amended) A solvent solution including a hexacoordinated silicon beta-diketonate composition of the formula $R_2Si(\beta\text{-diketonate})_2$ or $(RO)_2Si(\beta\text{-diketonate})_2$, wherein each R is the same as or different from the other R, and each R is independently selected from H, aryl, fluoroaryl, $C_1 - C_{12}$ alkyl, $C_1 - C_{12}$ fluoroalkyl, and $C_1 - C_{12}$ silicon-containing alkyl.
 2. (Amended) The solvent solution of claim 1, wherein each β -diketonate ligand of the composition may be the same as or different from the other β -diketonate ligand of the composition, and is independently selected from: 2,2,6,6-tetramethyl-3,5-heptanedionate; 1,1,1,2,2,3,3-hepta-fluoro-7,7-dimethyloctane-4,6-dionate; acetylacetonate; trifluoroacetylacetonate; and hexafluoroacetylacetonate.
 3. (Amended) The solvent solution of claim 1, wherein each β -diketonate ligand of the composition is 2,2,6,6-tetramethyl-3,5-heptanedionate.
 4. (Amended) The solvent solution of claim 1, wherein the composition is of the formula $R_2Si(\beta\text{-diketonate})_2$.
 5. (Amended) The solvent solution of claim 1, wherein the composition is of the formula $(RO)_2Si(\beta\text{-diketonate})_2$.
 6. (Amended) The solvent solution of claim 1, wherein the composition is of the formula $(t\text{-BuO})_2Si(2,2,6,6\text{-tetramethyl-3,5-heptanedionate})_2$.

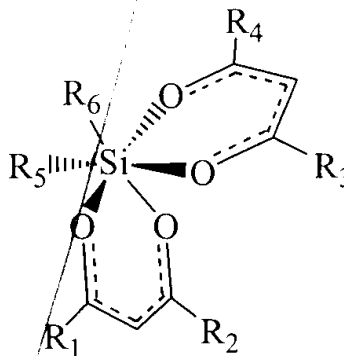
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7. (Amended) The solvent solution of claim 1, wherein the composition is of the formula $(\text{CH}_3)_2\text{Si}(2,2,6,6\text{-tetramethyl-3,5-heptanedionate})_2$.

8. (Canceled)

9. (Amended) The solvent solution of claim 1 including a hydrocarbon solvent.

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10. (Amended) The solvent solution of claim 1 including octane.

11. (Amended) A silicon β -diketonate for use in chemical vapor deposition and of the formula:



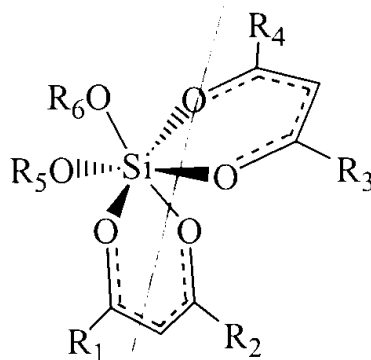
wherein:

R₁, R₂, R₃ and R₄ are the same as or different from one another, and wherein each of such substituents is independently selected from H, aryl, fluoroaryl, C₁ - C₁₂ alkyl, C₁ - C₁₂ fluoroalkyl, and C₁ - C₁₂ silicon-containing alkyl; and

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R_5 and R_6 are same as or different from one another, and each is independently selected from H, aryl, fluoroaryl, $C_1 - C_{12}$ alkyl, $C_1 - C_{12}$ fluoroalkyl, and $C_1 - C_{12}$ silicon-containing alkyl.

12. (Amended) A silicon β -diketonate for use in chemical vapor deposition and of the formula:



wherein:

R_1 , R_2 , R_3 and R_4 are the same as or different from one another, and wherein each of such substituents is independently selected from H, aryl, fluoroaryl, $C_1 - C_{12}$ alkyl, $C_1 - C_{12}$ fluoroalkyl and $C_1 - C_{12}$ silicon-containing alkyl; and

R_5 and R_6 are same as or different from one another, and each is independently selected from H, aryl, fluoroaryl, $C_1 - C_{12}$ alkyl, $C_1 - C_{12}$ fluoroalkyl, and $C_1 - C_{12}$ silicon-containing alkyl.

13-34. (Canceled)